

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

OKABE MASAO

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Date of mailing
(day/month/year)

14.12.2004

Applicant's or agent's file reference

10003811WO01

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/012782

International filing date (day/month/year)

27.08.2004

Priority date (day/month/year)

28.08.2003

International Patent Classification (IPC) or both national classification and IPC

Int.Cl. **C12N 15/11, C12Q 1/68, G01N 33/531, G01N 37/00**

Applicant

CANON KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:



Box No. I

Basis of the opinion



Box No. II

Priority



Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



Box No. IV

Lack of unity of invention



Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement



Box No. VI

Certain documents cited



Box No. VII

Certain defects in the international application



Box No. VIII

Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP 2004/012782

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/ 012782

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>2, 3, 5, 7-9, 11, 13, 15-21</u>	YES
	Claims	<u>1, 4, 6, 10, 12, 14</u>	NO
Inventive step (IS)	Claims	<u>3, 5, 7, 8, 11, 15-21</u>	YES
	Claims	<u>1, 2, 4, 6, 9, 10, 12-14</u>	NO
Industrial applicability (IA)	Claims	<u>1-21</u>	YES
	Claims		NO

2. Citations and explanations

D1: JP 2001-522998 A1 (FUNCTIONAL GENETICS INC.) 2001.11.20

D2: JP 2001-511361 A1 (RAPIGENE INC.) 2001.08.14

The subject matter of claims 1,4,6,10,12, and 14 does not meet the requirement of novelty.

The prior document D1 discloses a disk on which probes capable of specifically binding to a target substance are immobilized in known locations on the disk, characterized in that the probe carrier has many separated areas, wherein in each area probes of the same kinds are immobilized as 4-5 spots and probes of different kinds are not immobilized and in one area probes of the same kinds are immobilized as 4-5 spots (Claims 5,13-22, Figs 5-6).

The disk is regarded to fall within the definition the probe carrier in the present Claim 1,4,6,10,12, and 14.

The subject matter of claims 1,2,4,6,9,10,12,13,and 14 does not appear to involve an inventive step in view of the document D2 cited in the ISR for the following reason:

The prior document D2 cited in the international search report discloses an oligonucleotide probe carrier on which probes capable of specifically binding to a target substance are immobilized in known locations on the carrier, characterized in that the probe carrier has eight separated areas, wherein in each area mixed probes of the same kinds are immobilized as 72 spots and in one area mixed probes of the same kinds are immobilized as 72 spots (Pages 43-44, Figs 2-4).

A probe carrier on which probes of different kinds are not immobilized in one area is not disclosed in D2. However, said feature is commonly used art in the technical field of a probe carrier. Therefore the person skilled in the art would easily conceive the idea of employing pure probes.

The subject matter of claims 3,5,7,8,11,and 15-21 meets the requirements of novelty and an inventive step.

The prior documents D1 and D2 do not disclose varying the amount of probes in the plurality of areas respectively depending on a target substance to be detected. In addition to that, such an feature could not be deduced from the above-mentioned probe carriers in the documents.